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Social Sector Expenditures and Rainy-Day Funds

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Abstract

Gonzalez and Paqueo examine the effects of budget stabilization funds—often called rainy-day funds—on the volatility of social spending and, for contrast, on nonsocial sector spending. They analyze the rainy-day funds of U.S. states. The authors find that rainy-day funds are ineffective in reducing the volatility of nonsocial sector expenditures but are effective in reducing the volatility of social sector expenditures. The authors also find that states that have stringent deposit and withdrawal rules have higher rainy-day fund balances, and thus are more effective in reducing the volatility of social sector expenditures. Finally, for long-term effectiveness, stabilization funds depend obviously on sustained economic growth.

This paper—a joint product of the Economic Policy Sector Unit and the Social Protection Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to draw lessons from U.S. states on the effects of budget stabilization funds on the volatility of expenditures. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Holt, room I8-805, telephone 202-473-7707, fax 202-522-2119, email address pholt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at cgonzalez@worldbank.org or vpaqueo@worldbank.org. September 2003. (19 pages)

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I. INTRODUCTION

Reflecting increasing concern about economic insecurity and its social welfare consequences, an analysis of Latin American countries reveals the need for better social risk management systems to deal with economic shocks and uncertainty (De Ferranti, Perry, et al., 2000). Such a system involves a combination of policy instruments ranging from market insurance and self-insurance to social protection. One of these instruments highlighted in the above-mentioned study is the budget stabilization fund, often called "rainy-day fund." Noting that many countries suffer from pro-cyclical social spending, they argued for governments to save in good times to finance social spending in bad times. To quote:

> *"The poor do not, for example, frequently pull their children out of school during bad times—although they do when the recession is severe. But the fact that some educational and health outcomes are hurt during especially bad times may be as much the result of the government's inability to maintain the quality of social services as the household's decision to invest less during crises...Governments should save in good times to finance social spending in bad times..."* (De Ferranti, Perry, et al., 2002, pp. 9-10)

During the last two decades, virtually all of the U.S. states have adopted rainy-day funds, that allow them to smooth public spending over time by saving during booms and using the balances to cover revenue shortfalls during recessions. Prior to 1981, few states had such funds (Gold (1981), and Knight and Levinson (1999a)). By 1984, 18 states had enacted rainy day funds, and by 1994, 45 states had them (Knight and Levinson (1999a)). In 2000, almost all of the U.S. states have adopted budget stabilization funds, and their balances averaged $158 per capita, or 3.22 percent of total state expenditures.

This paper examines the effect of rainy-day funds on the volatility of social spending and, for contrast, on non-social sector expenditures. Further, it analyzes empirically the determinants of the size of the rainy funds. The characteristics of state rainy-day funds differ across states, in particular in terms of the stringency of their

deposit and withdrawal rules as well as the fund's size. This paper examines those aforementioned rules and other factors in determining the size of the rainy-day funds. Analysis of the U.S. experience could reveal useful lessons for Latin American and other developing countries.

II. LITERATURE REVIEW

The literature on "rainy-day funds" is summarized in table 1. Navin and Navin (1994) examine the state budget stabilization funds of Indiana, Iowa, Missouri, Michigan, Minnesota, Ohio and Wisconsin. In particular, they examined the movement of fund balances over time (1983-1991) to see how the fund balances move in relation to some indicators of fiscal health. The authors find that the use of these funds varies significantly among states as does the level of funding and therefore the ability of these tools to serve as effective instruments of counter-cyclical state fiscal policy.

Sobel and Holcombe (1996) examined the degree to which rainy-day funds eased the fiscal stress experienced by states during the 1990-1991 recession. The authors constructed a measure of state fiscal stress as the amount of discretionary tax increases plus the amount by which expenditure growth fell below average. Then, they constructed an empirical model to see whether the presence of an explicit rainy-day fund had an effect on the degree of fiscal stress experience by a state. Sobel and Holcombe found that rainy-day funds were effective in reducing fiscal stress if they had mandatory requirements for making deposits. Also, they show that for a given amount of fiscal stress, states that have rainy-day funds are more likely to cope with that fiscal stress through spending reductions than through increases in taxes.

Levinson (1998) shows that stringent balanced budget requirements enforced in some U.S. states have exacerbated business cycles in those states. He also shows that states with rainy-day funds have smoother business cycle fluctuations. Knight and Levinson (1999a) examined the effect of rainy-day funds on state savings behavior. They found that states with rainy-day funds have higher total balances than states without such funds and also have higher balances after adoption than before adoption. Furthermore,

rainy-day fund deposits increase total balances dollar-for-dollar. In sum, according to these authors rainy-day funds appear to belong to the growing set of fiscal institutions with real fiscal and economic consequences. Wagner (1999) shows that the increase in state budget stabilization funds is attributed to the 1980-1982 recession.

In a descriptive analysis of commodity-based stabilization and savings funds currently in place in Norway, Chile, Alaska, Venezuela, Kuwait, and Oman, Fasano (2000) finds that the outcome of their experience has so far been mixed, with differences among countries reflecting differences in objectives, institutional arrangements, adherence to operational rules, and the soundness of the overall fiscal policy. Nevertheless, he observed that in most cases the stabilization funds he reviewed have contributed to the enhancement of the effectiveness of fiscal policy by making the budget expenditure less driven by revenue availability.

With respect to the determinants of adoption of rainy-day funds, Wagner and Sobel (2001) shows that states with tax and expenditure limit laws in place were significantly more likely to establish these funds. They were significantly less likely, however, to adopt funds with stringent deposit and withdrawal rules. This suggests that some states adopted budget stabilization funds to circumvent existing fiscal constraints.

Finally, in the most recent study of the issue, Gonzalez (2002) has found these rainy-day funds to be ineffective, consistent with the findings of Sobel and Holcombe (1996) and Wagner and Sobel (2001). Noting that most of the states are not well prepared for the most recent recession, he finds that only 4 out of 50 states have enough rainy-day funds to ease a recession similar to that of the early 1990s. In this regard, he points out that the reason why some states don't have enough savings is because they have reached their cap on the fund size.

The above review of the literature reveals that current analyses have not examined the impact of stabilization funds on social expenditures. They have been limited mainly

to the analysis of their effectiveness in smoothing total spending and reducing fiscal stress.

It may be argued that rainy-day funds, even if they are not earmarked for specific expenditures such as those of the U.S. states, could reduce the volatility of social sector expenditures – and could do so without simultaneously stabilizing non-social sector expenditures. This differential effect can happen because politicians may prefer certain type of expenditures more than others. For example, during a lean year a politician facing the decision whether to use the rainy-day funds to finance the construction of a new road or to maintain the outlays for a certain school and health services could be more incline to choose the latter. That is, it maybe the case that politicians care more about maintaining a certain level of social sector expenditures, even at the expense of non-social sector expenditures.[1]

III. THE IMPACT OF RAINY-DAY FUNDS ON THE VOLATILITY OF EXPENDITURES

In the United States, state governments are responsible in the allocation on what it is known as the general fund. The general fund can be divided between social and non-social sector expenditures. The categories used for social sector expenditures in the General Fund are: elementary education, higher education, Medicaid, and cash assistance programs. In the non-social expenditures we could find the following categories: transportation, correction, and others. We will use these two type of expenditures to measure the effect of rainy-day funds on the volatility of expenditures.

To construct a measure of the volatility of expenditures (income), we ran a regression between expenditures (income) in real terms and a trend line. Then, we predicted the residuals and obtained their absolute value. Thus, the absolute value of the predicted residuals are used as a proxy for the volatility of expenditures (income).

[1] Such political preference would be stronger in cases where the influence of labor unions is relatively strong in the sector.

The basic specification that we used to test the effect of rainy-day funds on the volatility of expenditures is the following:

$$Vol\exp_{s,t} = \beta_1 Volinc_{s,t} + \beta_2 Rainy_{s,t-1} + \varpi_s + \varepsilon_{s,t}, \quad (1)$$

where *Vol*exp is the volatility of expenditures in state s at time t; *Volinc* is the volatility of gross state product (GSP) in state s at time t; *Rainy* is the rainy-day fund balance in state s at the end of year t-1; and ω are state fixed effects. The above variables are in million 1988 dollars.

Data: The data are drawn from a number of different sources. State rainy-day fund balances, and expenditures were obtained from several issues of the *Fiscal Survey of States* and *State Expenditure Report* published by the National Association of State Budget Officers (NASBO). Data on the characteristics of rainy-day funds[2] were obtained from NASBO (1999), Wagner (1999), and Knight and Levinson (1999a) and from the departments of finance of some states.

Results. Table 3 shows the regression results for (1), using data from the 1985 to 2000 period. We find that a dollar in the rainy-day fund balance decreases the volatility of social sector expenditures by about 34 cents. By contrast, column (3) of Table 3 shows that rainy-day fund balances do not have any effect on non-social sector expenditures. This implies that rainy-day funds are effective in reducing the volatility of the social sector expenditures but are ineffective as an overall budget stabilization fund. This result is consistent with Sobel and Holcombe (1996), Wagner and Sobel (2001), and Gonzalez (2002), which as mentioned found that rainy-day funds do not reduce the volatility of aggregate spending. Also, column (1) of Table 3 shows that states with higher volatility of income have a higher volatility in social sector expenditures.

Most of the regression results depicted in columns (1 and 3) of Table 3 are statistically significant at a 90 percent level of confidence. We tried a variation on

[2] See Table 2.

specification (1), using volatility in per capita gross state product instead of *Volinc*. As shown in column (2) in Table 3, the result is greater precision in the estimated coefficient of the rainy-day variable. A Hausman's specification test was also performed, indicating that the regression results from a random effects specification are biased. However, its coefficients are statistically significant and have the same sign as the fixed effects results. Finally, all of the regression results depicted in column (4) are not statistically significant, which implies that there is no correlation between the volatility of non-social expenditures and the rainy-day fund balances and the volatility of gross state product per capita. We tried different specifications and found the same results.

IV. RAINY-DAY FUND BALANCES AND CHARACTERISTICS

The characteristics of state rainy-day funds differ across states. They differ in particular in their deposit and withdrawal rules as well as the fund's size. Some states' laws mandate deposits to rainy-day funds in certain years. In others, they are determined by a formula based on the projected revenues. The majority of the states require only regular legislative approval for withdrawal of these funds. This allows coverage of revenue shortfalls, but has the drawback of not providing very stringent controls to ensure that funds are left untouched until they are needed. "Some states have maximum limits, or caps, on fund sizes. These limits range from 2 percent to 25 percent of expenditures. The most common limit is 5 percent, the generally accepted minimum level of total balances by credit rating agencies (Eckl (1997)), and the amount suggested by the National Conference of State Legislatures (Sobel and Holcombe (1996))."[3]

To examine the determinants of the size of the rainy-day fund, we constructed three dummy variables. The first is a dummy that indicates if the state has an stringent deposit rule for its rainy-day fund. This variable takes the value of 1 if the state requires that some money should be deposited into the rainy-day fund account, and the value of zero otherwise. The second dummy indicates whether the state has an stringent withdrawal rule for its budget stabilization fund. Specifically, this variable takes the value

[3] Knight and Levinson (1999a).

of 1 if the state requires a super majority approval in Congress, and zero otherwise. The third dummy indicates whether the rainy-day fund has a cap or not.

The following specification was estimated to explain the observed differences in the states' rainy-day fund balances.

$$Rainy_{s,t} = \beta_1 Rainy_{s,t-1} + \beta_2 Withdraw_{s,t} + \beta_3 Cap_{s,t} + \beta_4 Deposit_{s,t} + \beta_5 Income_{s,t} + \beta_6 Growth_{s,t} + \varpi_s + \varepsilon_{s,t} \quad (2)$$

where *Rainy* is the rainy-day fund balance in state s at the end of year t; *Withdraw* is a dummy variable indicating if the rainy-day fund has an stringent withdrawal rule; *Cap* is a dummy variable indicating if the rainy-day fund has a cap; *Deposit* is a dummy variable indicating if the rainy-day fund has an stringent deposit rule, *Income* is gross state product (GSP) per capita in state s at time t, *Growth* is the growth rate of gross state product, and ω are state fixed effects.

Results. Table 4 shows the regression results for (2) by using data from the 1985 to 2000 period. We found that, relative to the mean, states with stringent deposit rules have 124 percent more money on their rainy-day fund accounts than states without those strict rules. Also, we found that states with stringent withdrawal rules, on average, 137 percent more dollars on their rainy-day fund accounts than states without those tough withdrawal rules. Contrary to expectation, the coefficient for the rainy-day fund's cap is not statistically significant, although it has the expected sign. Further, high-income states have higher rainy-day fund balances than low-income states. Finally, states with high economic growth rate have higher rainy-day fund balances than those states with lower rates. These results are consistent with those from Sobel and Holcombe (1996).

All of the results depicted in Table 4 are statistically significant. Also, using Hausman's specification test, we find that the regression results from a random effects specification are biased. However, its coefficients are statistically significant and have the same sign as the fixed effects results.

V. CONCLUSION

In this paper we examine the effect of rainy-day funds on the volatility of expenditures. We found that rainy-day funds have a negative effect on the volatility of social sector expenditures and has no effect on the volatility of non-social sector expenditures. Therefore, rainy-day funds appear effective in reducing the volatility of social sector expenditures but are ineffective as an overall budget stabilization fund. The finding of a differential effect of rainy-day funds on the volatility of social and non-social spending qualifies earlier results regarding their effectiveness.

With respect to the determinants of the size of rainy-day funds across states, the conclusion is that states with stringent deposit and withdrawal rules have higher balances. Therefore, these states are the most effective in reducing the volatility of social sector expenditures. Moreover, unsurprisingly, the effectiveness of the rainy-day funds depends on economic growth. Higher rates of growth means greater potential for accumulation and less pressure to spend the rainy-day fund. These findings hold important lessons for the establishment and maintenance of an effective stabilization fund to reduce volatility of public social spending, although their application might not be straightforward in developing countries where political maturity is lacking and effective governance is weak.

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Table 1

Literature Review

Paper	**Findings (and critiques)**
Pollock and Suyderhoud (1986)	The authors claim that formula-based rainy-day funds can be destabilizing if not properly implemented. They used simulations to support their claim.
Navin and Navin (1994)	The authors examined the movement of the fund balances over time (between 1983 and 1991), to see how the fund balances move in relation to a number of indicators of state fiscal health. They show that use of the funds varies significantly among the states as does the level of funding and therefore the ability of the funds to serve as an effective tool for counter-cyclical state fiscal policy.
Sobel and Holcombe (1996)	The authors examined the degree to which rainy-day funds eased the fiscal stress experienced by states during the 1990-1991 recession. The authors constructed a measure of state fiscal stress as the amount of discretionary tax increases plus the amount by which expenditure growth fell below average. Then they constructed an empirical model to see whether the presence of an explicit rainy-day fund had an effect on the degree of fiscal stress experience by a state. Sobel and Holcombe found that rainy-day funds were effective reducing fiscal stress if they had mandatory requirements for making deposits. Also they show that for a given amount of fiscal stress, states that have rainy-day funds are more likely to cope with that fiscal stress through spending reductions than through increases in taxes.
Knight and Levinson (1999a)	The authors examined the effect of rainy-day funds on state savings behavior. In particular, the authors point out that states with rainy-day funds maybe inherently savers. If this were the case, states would save enough in their general fund accounts to avoid fiscal stress without the creation of special accounts.
Knight and Levinson (1999b)	The authors examined fiscal institutions in US states, and their fiscal and economic consequences. The authors point out the interaction of rainy-day funds with other fiscal institutions. In particular, Knight and Levinson discuss the endogeneity of balanced budget requirements and rainy-day funds.
Wagner (1999)	The author shows that increase in state budget stabilization funds is attributed to the 1980-1982 recession. The existence of tax and expenditure limitation laws, revenue uncertainty, the state's current fiscal health, and political motives also influence a state's choice to adopt a fund.
Fasano (2000)	The author examines the experience of oil funds currently in place in Norway, Chile (copper), the State of Alaska, Venezuela, Kuwait, and Oman. He

	finds that their experience has been mixed. But that in most of the cases, stabilization funds have been effective by making budget expenditure less driven by revenue availability. Their effectiveness appear to be determine by fiscal discipline and sound macroeconomic management.
Wager and Sobel (2001)	The authors find that states with tax and expenditure limit laws were significantly more likely to adopt statutory funds, but were significantly less likely to adopt funds with stringent deposit and withdrawal rules, suggesting that some funds were adopted to circumvent existing fiscal constraints.
Gonzalez (2002)	The author shows that most of the states are not well prepared for the most recent recession. In particular, he finds that 4 out of 50 states have enough rainy-day funds to ease a similar recession than that of the early 1990s. Also, he concludes that the reason why some states don't have enough savings is because they have reached their cap on the fund size.

Table 2
Rainy-Day Fund Characteristics

State	Fund Name	Year Adopted	First Balance	Deposit Rule	Withdrawal Rule	Maximum Fund Size
AL	Education Trust Fund-Proration Prevention Account	1927	1988	Formula	Appropriation	2% of expenditures
AK	Budget Reserve Fund	1986	1991	Appropriation	Appropriation	No limit
AK	Constitutional Budget Reserve	1990	1991	Mineral revenues in excess of permanent fund	¾ of legislature	No limit
AZ	Budget Stabilization Fund	1990	1994	Statutory formula	Statutory formula	Rolling cap
AR						
CA	Special Fund for Economic Uncertainties	1976	1977	General Fund Surplus	Revenue shortfall	No limit
CO	Required Fund Balance	1982	1982	4% Revenue forecast	Revenue shortfall	4% revenue forecast
CT	Budget Reserve Fund	1979	1984	Not less than 10% of General Fund Surplus	Governor request and 2/3 legislative approval	5% of current net General Fund appropriations
DE	Budget Reserve Account	1979	1979	General Fund Surplus	3/5 of legislature	5% of General Fund Revenue
FL	Working Capital Fund	1959	1965	General Fund Surplus	Revenue shortfall	10% of previous year's General Fund Revenue
FL	Budget Stabilization Fund	1992	1995	Required appropriation equal to 5% of last year's general fund revenue	Revenue shortfall	10% of previous year's General Fund Revenue
GA	Revenue Shortfall Reserve	1976	1976	3% of General fund surplus	Appropriation	No limit
HI	Emergency & Budget Reserve Fund	2000	2000	40% of Tobacco settle.	Appropriation	No limit
ID	Budget Stabilization Fund	1984	1984	Appropriation	Appropriation	No Limit
IL	Budget Stabilization Fund	2001	2001	Balance of Tobacco reserve fund	Controller's Discretion	No Limit
IN	Counter-Cyclical Revenue and Economic Stabilization Fund	1982	1985	Statutory formula	Statutory formula	7% of General Fund Revenue
IA	Cash Reserve Fund	1984	1994	Appropriation	Single-bill appropriation not to cause fund to fall below 3% of revenue estimate for that year	Statutory formula
IA	Economic Emergency Fund	1984	1992	Appropriation	Appropriation	5% of revenue estimate for that fiscal year
KY	Budget Reserve Trust Fund Account	1983	1983	General Fund Surplus and appropriation	Appropriation	5% of General Fund Revenue
KS	General Fund Ending Balance	1993	1993	7.5% of General Fund expenditures that year	Appropriation	No limit
LA	Revenue Stabilization and Mineral Trust Fund	1990	1999	Revenues exceeding $750 million from minerals	Appropriation	No limit

State	Fund Name	Year Adopted	First Balance	Deposit Rule	Withdrawal Rule	Maximum Fund Size
ME	Rainy Day Fund	1985	1985	1/2 of General Fund Surplus	Appropriation	5% of General Fund Revenue
MD	Revenue Stabilization Account	1985	1986	Required appropriation equal to 5% of estimated GF revenue that year	Appropriation	Less of 5% of General Fund revenue or $50 million
MA	Commonwealth Stabilization Fund	1985	1986	General Fund Surplus	Appropriation	5% of budgeted revenue
MI	Countercyclical Budget and Economic Stabilization Fund	1977	1978	Statutory formula	Statutory formula	25% of General Fund Revenue
MN	Budget Reserve Account	1981	1984	Appropriation	Appropriation	$522 million
MN	Cash Flow Account	1995	1996	Appropriation	Appropriation	$350 million
MS	Working Cash Stabilization Reserve Fund	1982	1983	Appropriation	Appropriation	7 ½ % of General Fund Revenue
MO	Budget Stabilization Fund	1992	1992	Appropriation	Appropriation	5% of previous year's General Fund Revenue
MT						
NC	Savings Reserve Account	1991	1991	General Fund Surplus	Appropriation	5% of General Fund Revenue
ND	Budget Stabilization Fund	1987	1990	General Fund surplus in excess of $40 million	Revenue must be 2 1/2% below forecast	No limit
NE	Cash Reserve Fund	1983	1984	General Fund Surplus	Revenue shortfall	No limit
NH	Revenue Stabilization Reserve Account	1987	1987	General Fund Surplus	Revenue shortfall	5% of General Fund Revenue
NJ	Surplus Revenue Fund	1990	1993	50% of General Fund Surplus	Revenue shortfall	5% of anticipated General Fund Revenue
NY	Tax Stabilization Reserve Fund	1945	1946	Statue	Revenue shortfall	No limit
NY	Constitutional Reserve Fund	1993	1994	General Fund Surplus	Appropriation	No limit
NM	Tax Stabilization Reserve	1966	1967	Appropriation	Revenue shortfall	No limit
NV	Budget Stabilization Designation	1994	1994	Statutory formula	Revenue shortfall	10% of General Fund Revenue
OH	Budget Stabilization Fund	1981	1985	5% of previous year's General Fund revenue if surplus is realized	Appropriation	No limit
OK	Constitutional Reserve Fund	1986	1988	10% of previous year's General Fund revenue if surplus is realized	Governor request and 2/3 legislative approval or ¾ legislative approval	No limit
OR	General Purpose Emergency Fund	1995	1995	Appropriation	Appropriation	No limit
PA	Tax Stabilization Reserve Fund	1985	1986	15% of General Fund Surplus	2/3 of legislative approval	3% of anticipated General Fund Revenue
RI	Budget Reserve and Cash Stabilization Account	1985	1985	Appropriation	Revenue shortfall	No limit

State	Fund Name	Year Adopted	First Balance	Deposit Rule	Withdrawal Rule	Maximum Fund Size
SC	General Reserve Fund	1978	1978	Statue requiring 3% of previous year's General Fund revenues	Revenue shortfall and zero balance in CRF	No limit
SC	Capital Reserve Fund	1986	1986	Statue requiring 2% of previous year's General Fund revenue	Revenue shortfall	No limit
SD	Budget Reserve Fund	1991	1992	General Fund Surplus	Revenue shortfall	5% of General Fund appropriations
TN	Revenue Fluctuation Reserve	1972	1972	10% of estimated tax revenue growth	Revenue shortfall	5% of estimated tax revenue
TX	Economic Stabilization Fund	1987	1990	½ of General Fund surplus plus oil and gas royalties	Revenue shortfall or appropriation	10% of General Fund revenue
UT	Budget Reserve Account	1986	1987	25% of General Fund Surplus	Revenue shortfall	8% of General Fund appropriations
VA	Revenue Stabilization Fund	1992	1995	Statutory Formula	Statutory Formula	10% of annual tax revenues
VT	Budget Stabilization Trust Fund	1988	1988	General Fund surplus	Revenue shortfall	5% of prior year's appropriation
WA	Emergency Reserve Fund	1981	1989	General Fund Surplus	2/3 legislative approval	5% of biennial General Fund Revenue
WI	Require Reserve	1981	1981	1% of General Fund Revenue	Revenue shortfall	No limit
WI	Budget Stabilization Fund	1985	1985	Appropriation	Appropriation	No limit
WV	Revenue Shortfall Reserve Fund	1994	1995	General Fund Surplus	Revenue shortfall	5% of General Fund appropriations
WY	Budget Reserve Account	1982	1983	Appropriation	Appropriation	5% of estimated General Fund revenue

Sources: Gonzalez (2002), Wagner (1998), Knight and Levinson (1999), and NASBO (1999).

Table 3
Estimates on the effect of Rainy-Day Funds on the Volatility of Expenditures

	1	2	3	4
Dependent Variables	Volatility of Social Sector Expenditures	Volatility of Social Sector Expenditures	Volatility of Non-Social Sector Expenditures	Volatility of Non-Social Sector Expenditures
Volatility of GSP	6.05e-08* (2.2e-08)		9.56e-08* (4.34e-08)	
Volatility of GSP per capita		0.156* (0.067)		0.091 (0.14)
Rainy-Day Fund Balances in the previous year	-0.33** (0.19)	-0.209* (0.12)	-0.2 (0.21)	0.022 (0.15)
Fixed effects (State)	Yes	Yes	Yes	Yes
N	695	695	694	694
R square	0.45	0.394	0.76	0.7
F	4.25	3.69	2.44	0.21

Note: Robust Standard errors are in parentheses.
* Statistically significant at a 95 percent level of confidence.
** Statistically significant at a 90 percent level of confidence.

Table 4

Rainy-day fund characteristics and balances

	5
Dependent Variable	Rainy-Day Fund Balance
Rainy-Day Fund Balance in the previous year	0.11* (0.047)
GSP per capita	0.025* (0.0079)
Growth rate of GSP	848.6* (423.4)
Stringent Deposit Rule	219.2* (85.7)
Stringent Withdrawal Rule	240.5* (102.2)
Cap	-65.8 (79.1)
Fixed Effects	Yes
N	484
R square	0.17
F	9.01

Note: Standard errors are in parentheses.
* Statistically significant at a 95 percent level of confidence.

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